BRUHAT BENGALURU MAHANAGARA PALIKE

Excecutive Engineer Yelahanka Division

Consultancy Services for Preparation of DPR for the work of Improvements to roads, drains and other developmental works in Attur ward no-03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package-02) Estimate Cost Rs.1400.00 Lakhs

Sl NO	List of Roads under Package 02
	Name of Work
1	Improvements to roads and drains at Akashavani layout and Venugopala Swamy layout and surrounding area in ward No .03, Yelahanka Satellite Town sub Division
2	Improvements to roads and drains at AMS layout and surrounding area in ward No .03 Yelahanka Satellite Town sub Division
3	Improvements to roads and drains at AMS layout extension and surrounding area in ward No .03 Yelahanka Satellite Town sub Division
4	Improvements to roads and drains at SFS 707 and surrouding areas in ward no.03 Yelahanka Satellite Town sub Division
5	Improvements to roads and drains at SFS 208 and surrounding areas in ward no.03 Yelahanka Satellite Town sub Division
6	Improvements to roads and drains at Sri Gandha layout and surrounding area in ward No .03 Yelahanka Satellite Town sub Division
7	Providing cobble stone and improvements infront of SHIG apartment in ward no -03 Attur of yelahanka sattellite town sub division.
8	Providing cobble stone and improvements infront of SLIG, MIG apartment in ward no -03 Attur of yelahanka sattellite town sub division.

Draft tender Schedule

SL. No.	Page No Item No.	DESCRIPTION OF WORK	Unit	Quantity	Rate as per Estimate, Rs	
					In Figures	in Words
1	Page No.138. Item No.18.11	KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials, labour charges complete as per specifications MORT&H Chapter-2	Sqm	2254.68	10.60	Rupees Ten and Paise Sixty Only
2	Page No.146. Item No.19.55	KSRRB 300-49. Scarifying bituminous course 50mm to 75mm thick along with premix carpet I surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labour charges complete as per specifications. MORTH I Chapter 3	Sqm	16386.50	95.40	Rupees Ninety Five and Paise Forty Only
3	Page No. 146. Item No.19.51	KSRRB 300-45. Scarifying stone metal crust 50mm to 100mm thick with pick axes along with premix carpet / surface dressing and stacking of old serviceable materials by manual means including cost of all labour charges complete as per specifications.MORTH / Chapter 3	Sqm	41408.05	84.80	Rupees Eighty Four and Paise Eighty Only
4	Page No.147. Item No.19.66	KSRRB M300-59.2. Loosening, levelling and compacting original ground supporting embankment to facilitate placement of first layer of embankment I subgrade, scarified to a depth of 150mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment I subgrade including HOM construction, labour etc .. complete as per specifications. MORTH Specification No. 305.3.4	Sqm	51529.71	24.38	Rupees Twenty Four and Paise Thirty Eight Only
5	Page No.143. Item No.19.14	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301	Cum	11835.58	43.46	Rupees Forty Three and Paise Forty Six Only
6	Page No.144. Item No.19.20	KSRRB M300-19. Removal of unserviceable soil including excavation, loading and disposal but excluding replacement by suitable soil which shall be paid separately as per clause 300.5 complete as per specifications. MORTH Specification No. 301	Cum	12082.10	34.98	Rupees Thirty Four and Paise Ninety Eight Only
7	Page No.153. Item No.20.6	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method by rotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision.	Cum	6214.94	1855.00	Rupees One Thousand Eight Hundred Fifty Five and Paise Zero Only
8	Page No. 155. Item No.20.18	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406.	Cum	10548.52	2001.28	Rupees Two Thousand One and Paise Twenty Eight Only
9	Page No.158. Item No.21.2	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and /or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH specification clause 501	Sqm	22832.79	5.30	Rupees Five and Paise Thirty Only

10	Page No.158. Item No.21.6	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg per sqm using mechanical means complete as per specifications. MORTH Specification No. 502.	Sqm	40534.13	33.92	Rupees Thirty Three and Paise Ninety Two Only
11	Page No.158. Item No.21.7	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen (VG10) on the prepared black topped surfaces at 0.25 kg per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5	Sqm	99833.37	12.72	Rupees Twelve and Paise Seventy Two Only
12	Page No.160. Item No.21.17.2	KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen.	Cum	2201.04	7620.34	Rupees Seven Thousand Six Hundred Twenty and Paise Thirty Four Only
13	Page No. 171. Item No.21.78.12	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015.do- using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)	Cum	2280.29	8699.42	Rupees Eight Thousand Six Hundred Ninety Nine and Paise Forty Two Only
14	Page No.174. Item No.22.1.1	KSRRB M600-1. Construction of dry lean cement concrete mix CC 1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 of MORTH V Revision and IS 456 Table-5 22.1.1 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor.	Cum	74.00	3800.10	Rupees Three Thousand Eight Hundred and Paise Ten Only

15	Page No.176. Item No.22.6.1	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to 18:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire [illegible]	Cum	133.23	5210.96	Rupees Five Thousand Two Hundred Ten and Paise Ninety Six Only
16	Page No.187. Item No.24.41	KSRRB M800 Road markers/Road stud: KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 - DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer with 2 years warranty for the reflectivity from the original manufacturer is mandatory along with necessary test certification [illegible]	No.	790.00	357.22	Rupees Three Hundred Fifty Seven and Paise Twenty Two Only
17	Page No.182. Item No.24.15	KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803	Sqm	3118.50	454.74	Rupees Four Hundred Fifty Four and Paise Seventy Four Only
18	Page No.124. Item No.15.80	KSRB 15-19.1 : Providing and applying ready mix priming coat over concrete I masonry I asbestos cement sheet I plastered surfaces including preparing the surface after thoroughly cleaning of oil, grease,dirt and other foreign matter, and sand papering including cost ofmaterials, labour, complete as per specifications.	Sqm	75.90	39.22	Rupees Thirty Nine and Paise Twenty Two Only
19	Page No.124. Item No.15.82	KSRB 15-19.2 : Providing and applying spray painting (excluding priming coat) over concrete I masonry I asbestos cement sheet I plastered surfaces with flat wall paint of approved brand to give even shade after cleaning the surface of all dirt, dust and other foreign matter,and sand papering including cost of materials, labour,complete as perspecifications.	Sqm	75.90	58.30	Rupees Fifty Eight and Paise Thirty Only
20	Page No.190. Item No.24.59	Supply and fixing of Retro Reflective Single Arrow Road Name Signboard of size 1600mm x 900mm made out of retro reflective sheeting conforming to Type XI standards of ASTM D 4956- 09 & as per IRC 67-2012 forfull back ground of blue colour & white letters and fixed over 4 mm thick Aluminium Composite Material sheet having minimum 0.5 mm thick Aluminium skin on both sides with back side painted grey colour and fixed over back support frame SS angle of 15mm x 20mm x 1.2mm, supported by 38mm OD stainless steel pipe all round in 304 grade and 2 nos of vertical posts of 50 mm OD stainless steel pipe of 202 grade firmly fixed to the ground by means of properly designed foundation of size 450mm x 450mm x 600mm in 1:1.5:3 ratio cement concrete. The background shall be blue in color with letters and border in white, the item includes earthwork excavation, cost of all materials, loading, unloading, lead, lift, transportation etc., complete. as per direction of engineer incharge of work clause 6.9 of IRC 67-2012 for Type XI retro reflective sheeting from the sheeting manufacturer & a certified copy of test reports from an independent test laboratory conforming to clause 6.7 of IRC 67-2012 including outdoor weather exposure report for theretro reflective sheeting offered shall be submitted by the contractor for technical qualification in the tender.	Sqm	102.24	14094.82	Rupees Fourteen Thousand Ninety Four and Paise Eighty Two Only
21	Item No 23 KUWS&DB 2018-19	Supply and fixing of medium duty SFRC Frame and Cover confirming to IS 12592 (part-I) 1988 and IS 12592 (part-II)-1991 with latest amendment including cutting slabs to the required size for the opening and fixing the cover in CC 1:2:4 and CM 1:3 plastering 20mm thick to all exposed faces, curing for 10 days with all lead and lift etc. complete. -Do heavy duty	Sqm	124.00	2203.74	Rupees Two Thousand Two Hundred Three and Paise Seventy Four Only

22	Page No.270. Item No.37.59.1	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications.	Cum	35.58	7273.72	Rupees Seven Thousand Two Hundred Seventy Three and Paise Seventy Two Only
23	Page No.136. Item No.17.1	KSRRB M100-1 Loading and Unloading of Stone Boulder I Stone aggregates ISand/ Kanker J Moorum. KSRRB M100-1 Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specifications. MORTH -100/ Chapter 1	Cum	72549.86	60.42	Rupees Sixty and Paise Forty Two Only
24	Page No.136. Item No.17.4	KSRRB M100-4.1. Cost of Haulage Excluding loading and Unloading MORTH -100/ Chapter 1 Case-1: Surface Road	t.km	1128937.32	2.12	Rupees Two and Paise Twelve Only
25	Page No.13 Item No.4.7	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregate 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing including cost of materials, labour, HOM complete as per specifications. MORTH Specification No. 408	cum	67.77	4479.56	Rupees Four Thousand Four Hundred Seventy Nine and Paise Fifty Six Only
26	Page No.27. Item No.5.30	Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete.	Nos	3738.00	432.48	Rupees Four Hundred Thirty Two and Paise Forty Eight Only
27	Page No.270. Item No.37.57	Removing and resetting of kerb stones	m	1341.30	104.94	Rupees One Hundred Four and Paise Ninety Four Only
28	Page No.180. Item No.24.1	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	801.20	84.80	Rupees Eighty Four and Paise Eighty Only

	Page No.103. Item No.14.6	KSRB 14.6-1 : Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. Specification No. KBS	Sqm	8094.76	1116.18	Rupees One Thousand One Hundred Sixteen and Paise Eighteen Only
30	Page No.270. Item No.37.56	Dismantling / Removing and resetting of footpath slab, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of including cost of all labour charges complete as per specifications. as directed by the Engineer,with all lead and lift etc. complete as per specifications complete as per specifications.	Sqm	13076.65	208.82	Rupees Two Hundred Eight and Paise Eighty Two Only
31	Page No.143. Item No.19.1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications. MORTH I Chapter 3	cum	1582.05	137.80	Rupees One Hundred Thirty Seven and Paise Eighty Only
32	Page No.229 Item No.28.8.2	KSRRB M2200-6. Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200	MT	3.07	72326.98	Rupees Seventy Two Thousand Three Hundred Twenty Six and Paise Ninety Eight Only
33	Page No.270. Item No.37.59.2	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200 including cost of materials, labour, HOM complete as per specifications.	Cum	160.78	7070.20	Rupees Seven Thousand Seventy and Paise Twenty Only
34	Approved Data Rate	Providing and laying Pre Cast Drain Cover slabs of 100mm thick of mix M20 using graded granite jelly 20mm down size with steel reinforcement, including from work, lift charges, curing and concrete finished surfaces on both side etc. complete and as per drawing and direction of Engineer-in-charge of work (data Rate enclosed)	Sqm	2945.63	2337.00	Rupees Two Thousand Three Hundred Thirty Seven and Paise Zero Only
35	Approved Data Rate	Providing and laying Pre Cast Drain Cover slabs of 250mm thick of mix M20 using graded granite jelly 20mm down size with steel reinforcement, including from work, lift charges, curing and concrete finished surfaces on both side etc. complete and as per drawing and direction of Engineer-in-charge of work (data Rate enclosed)	Sqm	328.50	5418.00	Rupees Five Thousand Four Hundred Eighteen and Paise Zero Only
36	Page No.27. Item No.5.33	Removing & Refixing stone slabs of drains and pointing in C. M (1 :3)	Sqm	352.98	105.00	Rupees One Hundred Five and Paise Zero Only
37	Page No.139. Item No.18.26	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of including cost of all labour charges complete as per specifications. as directed by the Engineer,with all lead and lift etc. complete as per specifications complete as per specifications. iii) Dismantling Stone Masonry. A. Rubble Stone masonry in lime mortar. MORTH Specification No. 202	Cum	84.49	306.34	Rupees Three Hundred Six and Paise Thirty Four Only
38	Page No.141. Item No.18.49	KSRRB M200-26. Dismantling Kerb stone by manual means and disposal of dismantled materials with all lifts and complete as per specifications. MORTH Specification No. 202	m	1077.90	12.72	Rupees Twelve and Paise Seventy Two Only
39	Page No.140. Item No.18.47	KSRRB M200-24. Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials stacking serviceable and unserviceable materials separately complete as per specifications. MORTH Specification No. 202	Cum	2749.01	952.94	Rupees Nine Hundred Fifty Two and Paise Ninety Four Only

"OTS APPROVED"

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ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ.

Executive Engineer,
Yalahanka Division, BBMP